

adm-19.6

S E C R E T

DD/ST# *4724-68*

10 December 1968

**MEMORANDUM FOR: Students, DD/S&T Career Development
Course #3
Director, DD/S&T Career Development
Course #3**

**SUBJECT : Planning for OCS Presentation,
27-31 January 1969**

I would like you to take a few minutes to fill in the attached questionnaire. This input will help us plan the OCS presentations (particularly those of a tutorial nature) so that they will be at a level appropriate to your background. Please complete and return the questionnaire to me in Room 2E29, Hqs. by 18 December 1968.

/s/
CHARLES A. BRIGGS
Director of Computer Services

Attachment: a/s

Distribution:

Orig & 1 - Dir/DDS&T CDC#3
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RETURN TO D/OCS, 2E29, HQS., BY 18 DECEMBER 1968

Circle the number preceding the items below with which you have little or no familiarity. "Familiarity" does not mean that you could lecture on the topic or answer in-depth questions about it. Our concern is whether the use of these terms in our presentations, without elaborating, would confuse you. Your selection for the Career Development Course did not presume any knowledge of these topics, so don't hesitate to indicate the terms or topics that are unfamiliar to you.

Computer Concepts

1. Distinction between analog and digital computers.
2. Functions of the basic components of a digital computer (arithmetic unit, control, channels, storage, etc.).
3. Stored program computer.
4. Elements of a computer instruction (operation code, address, index).
5. Types of computer instructions (arithmetic, logical, branching, input/output, etc.).
6. Binary notation and arithmetic.
7. Digital storage techniques (ferrite core, magnetic tape/disc/strips, punched cards, read-only memory).
8. Data encoding (BCD, ASCII, hexadecimal).
9. Fixed and floating point arithmetic.
10. Overflow and underflow.
11. Error detection/correction codes.
12. Communication methods (simplex, half-duplex, multiplexing).

Techniques

13. Distinction between assemblers, compilers, interpreters.
14. Operating systems, executive or control programs.
15. Programming languages (FORTRAN, COBOL, ALGOL, etc.).
16. Flow charting.
17. Program organization (macros, subroutines, programs).
18. Program testing (memory dumps, compiler diagnostics, traces).
19. Data sorting.
20. Extracting and encoding information (e.g., document indexing).
21. Matrix arithmetic.

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- 22. Linear programming.
- 23. Analog-to-digital conversion.
- 24. Emulation.
- 25. Multiprocessing.
- 26. Multiprogramming, time-sharing.

Agency Procedures and OCS Equipment

- 27. Functions of the Information Processing Staff/OPPB,
Information Processing Coordinators.
- 28. Functions of OCS Divisions.
- 29. IBM 360.
- 30. ANDI.
- 31. Computer driven plotters.
- 32. Optical character readers.

Agency Computer Activities

- 33. Orbit/trajectory analysis.
- 34. Telemetry analysis.
- 35. ELINT analysis.
- 36. Cartography.
- 37. Statistical data reduction.
- 38. Air defense system analysis.
- 39. Electromagnetic ray tracing.
- 40. War gaming.
- 41. Econometric analysis.
- 42. Intelligence and management information storage, retrieval,
and report generation.
- 43. OCS Time Sharing System facilities (TSAR, SOLVE, LINUS, etc.).
- 44. Administrative data processing (payroll, stock accounting,
personnel qualifications, personnel accounting, financial
accounting, security processing, training records, etc.).

**Indicate your answer to the following questions by circling the number
if your answer is no.**

- 45. Have you ever written a program in any language for any digital
computer?
- 46. Have you ever been involved in designing a digital computer
application?

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47. Have you ever used a key punch machine?
48. Have you ever used a terminal (typewriter or CRT) connected to a digital computer?
49. Have you ever had any work-related contact with Agency programming or computer operations personnel?

Name

Extension

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